

**DEFENSE LOGISTICS AGENCY (DLA)
SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM**

Proposal Submission Instructions

GENERAL

The Defense Logistics Agency (DLA) implements, administers, and manages the SBIR/STTR Program through the Logistics Operations, Research, and Development (R&D) Division. Consult <http://www.dla.mil/> for general information about DLA and its mission. If you have any questions regarding the administration of the DLA SBIR/STTR Program, please contact the DLA SBIR/STTR Program Manager (PM):

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DLA's projected funding levels support between one (1) and four (4) Phase I awards and one (1) Phase II awards from each topic. DLA reserves the right to limit awards under any topic.

TECHNICAL QUESTIONS

For questions regarding the SBIR/STTR topics during the pre-release period (Aug 26 – Sept 25, 2016), contact the Topic Authors listed for each topic on the SBIR/STTR website at <https://sbir.defensebusiness.org/> prior to the close of the pre-release. To obtain answers to technical questions during the open period (Sept 26 – Oct 12, 2016), submit your questions through the online SBIR SITIS Q&A System at <https://sbir.defensebusiness.org/>. For general inquiries or problems with electronic submission, contact DoD SBIR Help Desk at sbirhelp@bytecubed.com or 1-800-348-0787 between 9:00 am and 6:00 pm ET.

PHASE I KEY DATES

16.3 BAA (Pre-release)	Aug 26 – Sept 25, 2016
16.3 BAA (Open period)	Sept 26 – Oct 25, 2016
16.3 BAA Closes	Oct 26, 2016 at 6:00 a.m. ET
Phase I Evaluations	November - December 2016
Phase I Selections	January 2017
Phase I Awards	February-March 2017

PROGRAM BROAD AGENCY ANNOUNCEMENT (BAA) FY 16.3

PHASE I GUIDELINES

A list of the topics currently eligible for proposal submission is included in this section followed by full topic descriptions. DLA will only accept proposals from the topics listed in this BAA. DLA will not award Phase I proposals exceeding \$150,000. For detailed proposal submission guidance, refer to U.S. Department of Defense (DoD) Instructions 2016.3 SBIR at: <https://sbir.defensebusiness.org/>

PHASE II GUIDELINES

DLA will only consider previously awarded Phase I proposals for Phase II awards. DLA Phase II proposals must follow the detailed proposal submission guidance in the original Phase I BAA. Refer to U.S. Department of Defense (DoD) Instructions 2016.3 SBIR at <https://sbir.defensebusiness.org/>.

DLA Phase II proposals have a 40-page limit (excluding the Cost Proposal and the Company Commercialization Report). Pages in excess of the 40-page limitation will not receive consideration during the evaluation of the proposal (including attachments, appendices, or references).

Phase II is the demonstration of the technology that was found feasible in Phase I. Phase I awardees may submit a Phase II proposal without invitation; DLA expects Phase II proposals no earlier than 60 days and no later than 30 days prior to the end of the Phase I period of performance.

- All proposers are required to develop and submit a commercialization plan describing feasible approaches for marketing and manufacturing the developed technology.
- Proposers are required to submit a budget for the entire 24-month Phase II period. During contract negotiation, the Contracting Officer may require a Cost Volume for a base year and an incremental year. (Proposers must be aware of this possibility).
- At the Contracting Officer's discretion, Phase II projects may require an evaluation for technical progress prior to the end of the base year, prior to extending funding for the option year.

The DLA SBIR/STTR Program is committed to minimizing the funding gap between Phase I and Phase II activities. All DLA SBIR/STTR Phase II proposals will receive timely reviews and be eligible for interim funding

TECHNICAL ASSISTANCE

In accordance with the Small Business Act (15 U.S.C. 632), the DLA SBIR/STTR Program Office will authorize the recipient of a Phase I and/or a Phase II SBIR award to purchase technical assistance services (Discretionary Technical Assistance, DTA). These services include items such as access to a network of scientists and engineers engaged in a wide range of technologies, or access to technical and business literature available through on-line databases, for assisting such concerns as:

- Making better technical decisions concerning such projects;
- Solving technical problems which arise during the conduct of such projects;
- Minimizing technical risks associated with such projects; and
- Developing and commercializing new commercial products and processes resulting from such projects.

If you are interested in proposing the use of a vendor for technical assistance, you must provide a cost breakdown in the Cost Volume under "Other Direct Costs (ODCs)" and provide a one-page description of the vendor you will use and the technical assistance you will receive. The proposed amount may not exceed \$5,000 for Phase I and \$5000 for each year of a Phase II project. The description should be included as the LAST page of the Technical Volume. This description will not count against the Phase I or Phase II proposal page limit and will NOT receive an assessment against SBIR proposal evaluation criteria. Approval of technical assistance is not a guarantee and is subject to review of the Contracting Officer.

Cost Proposal: The proposer must submit a detailed cost proposal. Cost proposal information is

proprietary and will receive the proper classification. Identify proposed costs by both individual cost element and contractor fiscal year (FY) in sufficient detail to determine the basis for estimates, as well as the purpose, necessity, and reasonableness of each. This information will expedite award of the resulting contract if the proposal in the event of an award.

DLA recommends Phase II Cost Proposals include an estimate for travel for quarterly program reviews.

Notification of Selection and non-selection letters occurs electronically via e-mail.

Company Commercialization Report: All Phase II proposals must contain a “Commercialization Report of Prior SBIR Awards.” This report is an attachment or enclosure and not counted against the 40-page limitation. Use the online Company Commercialization Report is to fulfill this requirement. As instructed in paragraph 11.2 of the DoD BAA, prepare the report using the password-protected DoD SBIR electronic submission site, <https://sbir.defensebusiness.org/>.

Proposals not conforming to the terms of this BAA will not receive further consideration.

DELIVERABLES / REPORTS

All DLA SBIR and STTR awardees are required to submit reports in accordance with the deliverable schedule. The Awardee must provide all Reports to the individuals identified in Exhibit A of the contract. Milestones: Each phase of the project will be milestone driven. The Principal Investigator will propose milestones prior to starting any phase of the project.

Proposals should anticipate a combination of any or all of the following deliverables:

- Major milestone schedule and decision tree for project
- Initial Project Summary: one-page, unclassified, non-sensitive, and non-proprietary summation of the project problem statement and intended benefits (must be suitable for public viewing)
- Mid Term Project Review (may be in the format of a slide deck and teleconference or a short pre-formatted paper)
- Draft Final Report including major accomplishments and proposed path forward
- Final Report including major accomplishments and proposed path forward
- Final Project Summary (one-page, unclassified, non-sensitive and non-proprietary summation of project results intended for public viewing)
- Phase II Proposal (as Applicable)
- Applicable Patent documentation

DLA SBIR 16.3 Topic Index

DLA163-001	Subsistence Supply Chain Manufacturing Improvements
DLA163-002	Materiel Receipt Acknowledgement for Direct Shipments
DLA163-003	Tamper Resistant/Anti-Counterfeit Package Labeling

DLA SBIR 16.3 Topic Descriptions

DLA163-001 TITLE: Subsistence Supply Chain Manufacturing Improvements

TECHNOLOGY AREA(S): Materials/Processes

OBJECTIVE: Develop and promote manufacturing improvements in the subsistence supply chain. Leverage the latest technologies, encourage innovation and modernization, and to maximize capability and capacity in subsistence. The research seeks to identify and test of low-risk, high-impact technology, quality and process improvements of the individual and group combat rations, and improvements in subsistence products/equipment. Research projects shall involve current trends related to combat rations, field feeding solutions, food innovations, and nutrition and health.

DESCRIPTION: DLA Subsistence Network topics of interest are short term manufacturing improvement projects that:

- Increase efficiency; reduce production and transportation lead times for field feeding systems, which provide food to troops in training or serving in combat operations
- Improve the quality, surge capability, reduce costs, or increase efficiency in combat rations processes/products
- Address making effective and efficient innovative changes to current established food production and food products
- Increase the nutritional value of food products and nutritional value of food products for troops in the field or in garrison
- Mitigate current or potential risks in the subsistence supply chain related to these topics
- Explains how the technology or improvement addresses short term and long term needs of DLA/DoD

Candidate technologies should balance commercial considerations and DoD requirements.

PHASE I: The research and development goals of Phase I are to identify Subsistence Network related opportunities to improve combat rations/field feeding equipment/food innovations/ nutrition and health in the DLA Subsistence Supply Chain. Develop plan for the innovative approach/improvement to the subsistence-related topics of interest. The research and development goals of Phase I are to identify and validate the feasibility of the technology or innovative process by demonstrating reduced cost, increased efficiencies, improved surge demands, enhanced quality (e.g., improved nutritional value, extending shelf life).

PHASE II: Based on the results achieved in Phase I, DLA Subsistence Network will decide whether to continue the effort based on the technical, commercial merit, and feasibility of the proposed solution. The research and development goals of Phase II are to demonstrate how the plan will be successfully executed and result in cost savings, efficiencies, quality improvements, or other performance measures. Further, demonstrate how the plan leverages existing or developing technology in subsistence-related topics that will improve the manufacturing process. Lastly, provide the cost benefit analysis with specific metrics for measuring progress and success.

PHASE III DUAL USE APPLICATIONS: At this point, no specific SBIR funding is associated with Phase III. The solution and its quantifiable results will be used to build a compelling business case where the agency may choose to pursue a sole source contract utilizing the technology developed through the Phase I and Phase II effort.

REFERENCES:

1. DoD Manual 1338.10, DoD Food Service Manual;
<http://www.dtic.mil/whs/directives/corres/pdf/133810m.pdf>

2. TB MED 530/NAVMED P-5010-1/AFMAN 48-147_IP, "Tri-Service Food Code," October 7, 2013;
<http://www.med.navy.mil/directives/Pub/5010-1.pdf>

KEYWORDS: Combat Rations, Nutrition and Health, Food Innovations, Field Feeding Solutions

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DLA163-002 TITLE: Materiel Receipt Acknowledgement for Direct Shipments

TECHNOLOGY AREA(S): Materials/Processes

OBJECTIVE: The objective of this topic is to provide a best practice process and supporting technology requirements that will provide customers who receive material directly from DLA or DLA suppliers a user-friendly process for effective acknowledgement of receipt for these shipments.

DESCRIPTION: The process to ensure accurate accountability for materiel shipped directly from DLA or DLA suppliers provides both a process and technological challenge for DLA. The Materiel Receipt Acknowledgement (MRA) process is required for the Services to acknowledge the receipt of all DLA Direct and Customer Direct shipments. Missing MRAs is a DoD-wide problem shared by all Services and across all sources of supply. The impact of missing MRAs includes loss of accountability of the materiel, wasted resources to track materiel, supplier payment delays, late payment fees, as well as, auditability and inventory accuracy issues for both the Services and DLA.

DoDM 4140.01-VS, February 10, 2014 established the requirement for all receiving activities to submit an MRA. It states: "Receiving activities will:

- (1) Record receipts no later than five (5) business days from date materiel received.
- (2) Make associated assets visible from the point of inspection and acceptance within 24 hours of recording receipts (holidays and weekends excepted).
- (3) Notify the local accounting and finance office of the item receipt within 24-hours.
- (4) Notify the accountable property officer of recording receipts, when applicable.
- (5) Provide MRA for receipt of all shipments of materiel, whether requisitioned (pulled) or pushed to them, from any supply source, e.g., issues from stock; direct or prime vendor deliveries; or issues from DLA Disposition Services according to References (p) and (q). Inventory title transfer and customer billing is not predicated on processing of the MRA transaction."

DLA seeks to identify industry best practices and associated technologies to improve the performance of the MRA process. The desired solution should emphasize convenience, speed, ease of use, low cost and minimal manual data entry.

PHASE I: The research and development goals of Phase I is to present industry best practices in comparison with DLA's current state operation. Compare and contrast best practices to DLA's current state and develop courses of action. Examine the feasibility of implementing various courses of action through analysis or proof of concept. The small business firm shall deliver a report to include a plan that identifies technologies and process improvements to support objective as well as a business case demonstrating the cost-benefit impact of implementation.

PHASE II: Based on the results achieved in Phase I, DLA Logistics Operations will decide whether to continue the effort based on the technical, commercial merit, and feasibility of the proposed solution. The research and development goals of Phase II are to conduct a limited demonstration and test of the new technology in one or more of the DLA supply chains, with a specific suppliers or a supply class and quantifiably demonstrate an increase in the

MRA participation percentage, a reduction in MRA lead-time, and an improvement in data input accuracy.

PHASE III DUAL USE APPLICATIONS: At this point, no specific funding is associated with Phase III. The vendor will use its solution and quantifiable results to build a compelling business case where the agency may choose to pursue a sole source contract utilizing the technology developed through the Phase I and Phase II effort.

REFERENCES:

1. DoDM 4140.01-V1, February 10, 2014

KEYWORDS: acceptance, accountability, inspection, inventory, materiel, materiel management, supply chain, supplier

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DLA163-003 TITLE: Tamper Resistant/Anti-Counterfeit Package Labeling

TECHNOLOGY AREA(S): Air Platform, Battlespace, Chemical/Biological Defense, Ground/Sea Vehicles, Human Systems, Materials/Processes, Nuclear Technology, Sensors, Space Platforms, Weapons

OBJECTIVE: The Department of Defense (DOD) establishes internal DOD policies for detecting, avoiding, and remediating counterfeit parts in the DOD supply chain, and allocates responsibility among various DOD offices and functions for administering or developing those counterfeit prevention policies. Department of Defense Instruction (DODI) 4140.67, titled "DoD Counterfeit Prevention Policy," was issued on April 26, 2013, and prescribes the federal government's efforts to deal with the epidemic of counterfeit parts that led to the inclusion of a provision specifically targeted at counterfeit electronic parts in the fiscal year 2012 National Defense Authorization Act (NDAA). The Defense Logistics Agency (DLA) understands the challenges for our Original Equipment Manufacturers (OEMs) and Distributors that make up our supply base with regard to the development and implementation of technological solutions for counterfeit prevention. In an effort to meet the DODI 4140.67, DLA would like to explore technologies in tamper resistance/anti-counterfeit package labeling technologies.

DESCRIPTION: Identify and demonstrate a labelling technology that is applicable across the majority of packaging types for materiel that DLA buys. Demonstrate the technologies capability to detect the application of counterfeit labels or tampered packaging to prevent counterfeit materiel from entering the supply chain without more thorough inspection. The technology should be affordable and be able to detect tampered or counterfeit package labels at DLA's supply centers and authorized dealers. Establish methods to identify compromised package labels and assess whether the package label is valid. At a minimum, the technology must be effective in preventing counterfeits by reliably authenticating items that have no evidence of tampering and have valid labeling. Anti-Counterfeiting features and tamper evident features may include, for example:

- Quick Response (QR) code – A QR code which can be scanned using a QR reader on a phone will take the user to a website page for validation
- Print Feature – Deliberate print markings that a counterfeiter may not think to replace
- Cold Foiling – Silver foil applied to a package making it more of a challenge to counterfeit
- Void Material – Upon peeling back the label material wording such as "VOID" can appear indicating that the packaging has been tampered with
- Radio frequency identification (RFID) tags – hidden under labels

- Thermochromatic ink – exposure to heat will make print features appear or disappear
- 2D Matrix – Information encoded text in black and white “cells” arranged in a square
- Microtext – Text that is printed so almost imperceptible to the human eye and only legible through a magnifying glass
- Holograms – Contains features that are hard to replicate by counterfeiters
- Fluorescent Inks – UV light reveals hidden code

PHASE I: The research and development goals of Phase I is to present a technology preferably used as an industry best practice. Examine the feasibility of implementing the technology for DLA’s supply chain through analysis or proof of concept. Prepare a test plan that demonstrates the technologies tamper and counterfeit detection capabilities. The small business firm shall deliver a report that presents the results of the demonstration, describes how the technology might be implemented at DLA, examines the level of detection and reliability of the technology to support the objective as well as the benefit associated with of implementation.

PHASE II: Based on the results achieved in Phase I, DLA Logistics Operations will decide whether to continue the effort based on the technical, commercial merit, and feasibility of the proposed solution.

PHASE III DUAL USE APPLICATIONS: At this point, no specific funding is associated with Phase III. The vendor will use its solution and quantifiable results to build a compelling business case where the agency may choose to pursue a sole source contract utilizing the technology developed through the Phase I and Phase II effort.

The developer will pursue dual commercialization of the various technologies and processes developed in prior Phases. Potential commercial uses in manufacturing mechanical parts or materials, labels, and other items determined to be at high risk for counterfeiting

REFERENCES:

1. DoDI 4140.67, April 26, 2013, DoD Counterfeit Prevention Policy

KEYWORDS: Tamper Resistant, Anti-Counterfeit, Package Labeling, Packaging, Quick Response (QR) code, Print Feature, Cold Foiling, Void Material, Radio frequency identification (RFID) tags, Thermo-chromatic ink, 2D Matrix, Holograms, Fluorescent Inks

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